peak plasma insulin value was reached 15 minutes after glucose injection.

These findings lead us to conclude that intravenous administration of hypertonic solutions such as glucose 40%, but probably also radiographic contrast media, may cause a fall of blood pressure in the elderly, probably through direct vasodilatation. Secondly, the endogenous insulin response to glucose 40% given intravenously elicited no effect on blood pressure in the elderly.

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Health and nutrition of Ethiopian refugees in emergency camps

SIR,—Dr Paul Shears and colleagues draw attention to the high mortality among Ethiopian refugees arriving in the Sudan in 1985 (1 August, p 314). The mortality remained high despite the relief programme in the area and was observed in a number of camps with differing standards of relief services.

The main determinant of mortality was the extremely poor nutritional state of the population on arrival. Severely malnourished people of all ages may be kept alive for some time by the efforts of relief agencies, but they often fail to improve nutritionally because of impaired gastrointestinal and metabolic function and finally succumb to infection weeks later. Reactivation of infections with refeeding was not specifically recognised but might have contributed to the delayed mortality in that confused environment.[1,2]

The authors do not regard water supplies as a major problem. As one who was working in the area at that time, I know that in many of the camps the water supply was the weak link in the provision of early services in the emergency. Both the quality and, more importantly, the quantity of water were inadequate.

There was another factor which probably added to the high mortality. Non-governmental agencies appeared at times to be more concerned with interagency rivalry and the pursuit of rigid ideology than the welfare of the refugees. On one occasion three agencies were asked to provide medical services for a large group of new arrivals in very poor condition. None of these agencies wanted to be involved in "curative medicine." As a result, during the first critical weeks, when many of the population were acutely ill, the curative services provided were quite inadequate and many died of treatable conditions. Agencies concerned in disaster relief programmes must make the welfare of the victims their prime concern rather than their own prestige or ideology.

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Regular Review: Somatostatin

SIR,—We would like to comment on the statement made by Professors S R Bloom and J M Polak (1 August, p 288) about the efficacy of somatostatin in controlling variceal haemorrhage. They state that "the initial reports were good but have not been confirmed, and the long acting analogue is of doubtful usefulness in treating either bleeding peptic ulcer or bleeding varices." Though studies of the efficacy of somatostatin in controlling haemorrhage from peptic ulceration have produced conflicting results, this is not the case with bleeding oesophageal varices. Thus control of bleeding was achieved in 47 of the 62 episodes of variceal haemorrhage treated with somatostatin in the three published randomised controlled clinical trials, a success rate of 74%.[1-3] Such an outcome compares favourably with that achieved with vasopressin, which in the 13 randomised control trials reported to date has controlled bleeding in 122 out of 238 (51%) episodes of bleeding.[4] Moreover, no major complications have been associated with the use of somatostatin to control variceal haemorrhage, in contrast to vasopressin, which, at the dosages used to control variceal haemorrhage, may produce serious, and sometimes fatal, side effects in about 15-25% of patients. Therefore at present the evidence suggests that somatostatin is safer and more effective than vasopressin for the control of acute variceal haemorrhage.

There is little doubt that injection sclerotherapy is currently the treatment of choice for the control of acute variceal haemorrhage, bleeding being controlled in about 85-95% of patients presenting for treatment. The facilities for injection sclerotherapy, however, are not always available at the admitting hospital, and there may be no one present with the skill to inject a copiously bleeding varix. Consequently, there is a need for a stop gap treatment that is safe and effective and can be instituted rapidly without the need for special skills. As balloon tamponade of the oesophagus may be associated with a prohibitively high complication rate and requires skilled use, we believe that such circumstances necessitate a safe pharmacological agent to control bleeding. Evidence suggests that somatostatin is effective for this purpose. Clearly, however, further prospective randomised trials are required to confirm the role of somatostatin, and possibly its analogues, in controlling acute variceal haemorrhage.

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Abuse of fresh frozen plasma

SIR,—I agree wholeheartedly with Dr Jennifer Jones about the abuse of fresh frozen plasma (1 August, p 287), but she does not discuss its use in the special care baby unit, where it has been recommended for premature infants who are at risk from intraventricular haemorrhage and who commonly have a haemostatic defect which may contribute to their death.[1-6]

Over two years we identified 21 premature infants (gestational age 29 weeks, range 25-32 weeks) with abnormal clotting on the first day of life (international normalised ratio greater than 2·0, kaolin-cephalin clotting time ratio greater than 2·0). Fifteen babies with abnormal clotting received fresh frozen plasma in a dose of 10 ml/kg and had a repeat clotting sample tested within 24 hours. In all the clotting ratios were normal. The mean reduction in international normalised ratio was 0·7 (range 0·2-1·5) and mean reduction in kaolin-cephalin clotting time ratio was 1·6 (range 0·6-4·5).

During the period of study seven babies were found at necropsy to have substantial intraventricular haemorrhage. Of these, two babies with abnormal clotting ratios (international normalised ratio 1·9 and 3·2, clotting time ratio 6·0 and 6·0) had received fresh frozen plasma while five babies with normal clotting ratios had not received fresh frozen plasma.

Thus, although we are confident that we can correct the haemostatic defect with fresh frozen plasma, we have no evidence that this can save lives.

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Rapid resolution of signs of primary intracerebral haemorrhage in computed tomograms of the brain

SIR,—I cannot agree with the uncritical dismissal by Dr M S Dennis and colleagues of magnetic resonance imaging in the investigation of stroke (8 August, p 379). They are also mistaken in their belief that it is the T_2 relaxation time which distinguishes subacute haemorrhage from infarction and cite early work which did not compare haemorrhage and infarction but dealt with a small heterogeneous collection of intracranial haemorrhages imaged at different times on a low resolution prototype 0·147 tesla resistive system.

Numerous clinical studies have documented the superiority of magnetic resonance imaging over computed tomography in detecting cerebral infarcts.[1-3] These changes in ischaemic brain are shown earlier on magnetic resonance imaging than computed tomography,[4] because small increases in tissue water insufficient to change x ray attenuation coefficients are shown by a prolongation of the magnetic relaxation time. This gives a typical hyperintense signal on a T_2 weighted image and an isointense or hypointense signal on a T_1 weighted image.

Although more noticeable on high field than on

low field strength images, the evolution of intracerebral haemorrhage is characteristic and progresses in an orderly fashion due to the conversion of the oxyhaemoglobin forming the clot through deoxyhaemoglobin to methaemoglobin and finally its sequestration as haemosiderin in macrophages.[5] This results in acute haemorrhage showing a preferential shortening of the T_2 relaxation time, which produces a relative signal void in the haemorrhagic focus on T_2 weighted images. This feature easily distinguishes acute haematoma from infarction.

Subacute haematoma is accurately identified with magnetic resonance imaging as, from about day 5, the paramagnetic effect of methaemoglobin on T_1 shortening effects a high signal on T_1 weighted images. This contrasts with the lengthening of the T_1 relaxation, which produces a low signal in infarcted or ischaemic brain. Chronic haemorrhage is seen as an irregular area of signal loss on T_2 weighted images owing to the magnetic susceptibility effects of haemosiderin while chronic infarcts are usually well circumscribed areas of altered signal intensity containing fluid with a signal similar to cerebrospinal fluid on T_1 and T_2 weighted images. The adjacent brain may show signs of atrophy with both conditions.

Even on my own low field 0·15 tesla unit I have often observed these differentiating features which make magnetic resonance imaging an ideal method for imaging a patient with a suspected stroke, especially if the lesion is in the brain stem or close to dense bone. Magnetic resonance imaging can easily solve the problem of differential diagnosis highlighted in this Lesson of the Week, providing yet more support for an increase in the currently limited availability of magnetic resonance imaging in the United Kingdom.

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Acute stress erosions: can they be prevented?

SIR,—We agree with Drs Gillian C Hanson and B G Gazzard (8 August, p 348) that the use of antacids and H_2 receptor antagonists should be restricted to patients who are at serious risk of haemorrhage secondary to stress erosions. We also agree that there is increasing evidence that antacids may be more efficacious than H_2 receptor antagonists. Antacids are, however, not without their own side effects in critically ill patients, including hypermagnesaemia, hyperaluminiumaemia, metabolic alkalosis, diarrhoea, and constipation, and some impose a large sodium load. Furthermore, regular antacid treatment is more time consuming to administer than an intravenous injection of H_2 receptor antagonists. In the critically ill patient who requires the simultaneous administration of many drugs and other therapeutic procedures antacids may inadvertently be omitted.

H_2 receptor antagonists are effective in reducing gastric pH in some patients (as well as having the other benefits alluded to in the leading article). This intensive care unit has for some time routinely administered ranitidine, 50 mg every six hours intravenously, to those at risk and then regularly monitored its effect by measuring the pH of the nasogastric aspirate. If this is less than 4 then 30 ml of magnesium trisilicate mixture *BP* is administered and the pH of the nasogastric aspirate remeasured two hours later. If the pH remains high we do not administer more antacid but continue frequent monitoring of nasogastric pH and add in an antacid when the pH falls below 4. This approach to the problem uses the advantages of both types of treatment and minimises the risks to the patient.

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The cost of nursing

SIR,—Dr K W M Scott (8 August, p 393) has confused the Royal College of Nursing with the statutory bodies, in Wolverhampton's case the English National Board for Nursing, Midwifery and Health Visiting, whose role it is to approve nurse education courses. The Royal College of Nursing is the world's largest professional organisation and trade union for nurses and students of nursing, with over 260 000 members in the United Kingdom.

Dr Scott should realise that the general thrust and key components of the proposals in Project 2000, produced by the United Kingdom Central Council for Nursing, Midwifery and Health Visiting, enjoy the unprecedented support of all branches of the nursing profession.[1] The United Kingdom is one of the last major English speaking countries to conduct all of its initial nursing education within hospitals on the apprenticeship model. This model no longer meets today's needs, much less those of the future. The central concern of the Project 2000 reforms is to meet the health care needs of the British population into the next century.[2-4] Of course, there will be manpower difficulties if Project 2000 is implemented, but these will be vastly more serious if reforms to basic nurse education which have been advocated by reports stretching back decades are thwarted now by short term special pleading. If Dr Scott and his colleagues have legitimate questions about Project 2000 they should raise them with the Central Council or the Royal College of Nursing and not make unsubstantiated references to its "impact on other professional groups or patient services." The reforms will improve the service for consumers, which must surely be above the self interest of all professional groups, even doctors.

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SIR,—The Joint Consultants Committee is worried about Project 2000 (1 August, p 342); perhaps I can clarify some of the misunderstandings about it. Student status for nurses has been advocated since the Lancet report in the 1930s[1] and means that students would not be counted as part of the workforce; it does not mean they would have no clinical experience.

The high wastage we have at present is because students are left to cope on the wards without adequate supervision or preparation. Sisters cannot give the supervision they would wish owing to the shorter working week, high patient turnover, and the change in the sister's role.[2] A sister may have as many as 12 consultants to a ward and consequently a variety of patients requiring very different nursing care. Student status would enable students to learn the theory followed by appropriate supervised practice, and they would continue to have early contact with patients.

Nurses who already have student status — those following degree courses — have a low wastage rate and stay in nursing longer than others.[3] Trainee nurses following the general registration programme are in school for only about 28 weeks during the three years. Such little theoretical input has no academic credibility and is insufficient to provide the nurse with the knowledge and understanding required today and for the future.

Project 2000 proposes an increase in the number of qualified nurses, which should mean that standards of care will improve. Any educational improvement is costly, and the profession would not want this at the expense of patient care. It requires central funding and a major investment now if we are to have a properly educated workforce to meet the needs of patients in the future. The status quo is not an option.

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How to signpost your hospital

SIR,—I enjoyed Dr Hugh Baron's paper on how to signpost your hospital (22 August, p 482), and many hospitals could benefit from his advice. I would, however, take issue on two points.

He implies that a sans serif rather than a serif typeface was chosen for motorway signs despite the Road Research Laboratory having shown no significant differences between the two. The fact is that a sans serif face was chosen because road signs had always been in sans serif type and there seemed to be no merit in changing a good example of one for a good example of the other. What the Road Research Laboratory did show was that it was the size and spacing of letters that were important, not whether they had serifs or not, and that at speed upper and lower case on a dark background were easier to read than signs all in capital letters. They also showed that the legend should as far as possible fill all the available space on the board.[1]

Secondly, I am surprised that he totally ignores market research from the world of advertising. Ogilvie showed that, while a serif typeface is easier to read on the printed page, a sans serif face is easier to read at a glance[2]—and a glance is all that a sign should need.

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